WHAT IS CLAIMED IS:

1. A method for producing antimicrobial protein, comprising

expressing as a fusion protein in a prokaryotic cell, a basic antimicrobial protein A having a predetermined mode of an intramolecular disulfide bond as an active type by combining the protein A with a partner protein B having an isoelectric point below pH 7 and a chaperon function,

recovering the fusion protein, and

modifying and activating the antimicrobial protein A in the fusion protein into the active type by utilizing a function of the partner protein B.

2. The method according to claim 1, wherein the fusion protein is expressed by culturing a prokaryotic cell inserted with DNA encoding the fusion protein to express the DNA in the prokaryotic cell.

3. The method according to claim 1, wherein the antimicrobial protein A is any one of thionin, PR protein, lipid transfer protein and ribosome- inactivated protein, all derived from plants, or any one of difensin derived from plants, insects and humans.

4. The method according to claim 1, wherein the partner protein B comprises an acid partner protein B1 at least with an isoelectric point below pH 7 and a chaperon partner protein B2 at least with a chaperon function.

5. The method according to claim 1, further comprising separating the antimicrobial protein A from the partner protein B in the fusion protein and modifying the antimicrobial protein A into an antimicrobially active type by utilizing the function of the partner protein B.

6. The method according to claim 5, wherein the step of separating

the antimicrobial protein A from the partner protein B includes the cleavage of a peptide bond in the border of the two proteins.

7. The method according to claim 5, wherein the step of separating the antimicrobial protein A from the partner protein B includes the cleavage of an oligopeptide moiety interposed in the border of the two proteins for cleavage.

8. The method according to claim 5, wherein the step of modifying the antimicrobial protein A into the antimicrobially active type thereof includes a general refolding procedure of disulfide bond for promoting the modification.

9. A fusion protein comprising

a basic antimicrobial protein A having a predetermined mode of an intramolecular disulfide bond as an active type, and

a partner protein B having an isoelectric point below pH 7 and a chaperon function.

10. The fusion protein according to claim 9, wherein the antimicrobial protein A and the partner protein B are chemically bonded together.

11. The fusion protein according to claim 9, wherein the antimicrobial protein A and the partner protein B form in series a polypeptide chain through an oligopeptide moiety enzymatically cleavable.

12. The fusion protein according to claim 9, wherein the antimicrobial protein A and the partner protein B are partially or wholly associated together via hydrophobic affinity or electric properties.

13. The fusion protein according to claim 9, wherein the antimicrobial protein A is any one of thionin, PR protein, lipid transfer protein and

ribosome-inactivating protein, all derived from plants, or any one of difensin derived from plants, insects and humans.

14. The fusion protein according to claim 9, wherein the partner protein B is thioredoxin (Tx) or chaperonin.

15. The fusion protein according to claim 9, wherein the chaperon function of the partner protein B is a refolding function to modify a wrong bonding position of the intramolecular disulfide bond into a right bonding position in the protein A for the active type thereof.

16. The fusion protein according to claim 9, wherein the partner protein B is protein disulfide isomerase (PDI) or an acid protein encoded by DNA downstream of the nucleotide sequence of thionin derived from plants.

17. A fusion protein comprising: a basic antimicrobial protein A having a predetermined mode of an intramolecular disulfide bond as an active type; an acid partner protein B1 at least with an isoelectric point below pH 7; and a chaperon partner protein B2 at least with a chaperon function.

18. The fusion protein according to claim 17, wherein the acid partner protein B1 comprises a carboxyl terminal region of the PDI derived from Fumicola insolens and the chaperon partner protein B2 is peptidylprolyl-cis-trans-isomerase.

19. A partner protein comprising an acid partner protein B1 at least with an isoelectric point below pH 7 and a chaperon partner protein B2 at least with a chaperon function, wherein the partner protein is a protein to be used for the formation of a fusion protein, together with a basic antimicrobial protein A having a predetermined mode of an intramolecular disulfide bond as an active type.

20. DNA encoding a fusion protein according to claim 1.